

WHAT IS CLAIMED IS:

1 A method of displaying nodes within a network topology, the method  
using a processor coupled to a display screen, the method comprising:

2 forming a first layer of a multi-layer representation wherein at least two nodes  
3 are represented separately;

4 grouping the nodes of the first layer into group nodes to form a second layer in  
5 the multi-layer representation;

6 grouping the group nodes of the second layer into a third layer, the third layer  
7 having at least one connected-superset node containing group nodes with nodes connected to  
8 each other, and at least one isolated-superset node containing group nodes having nodes  
9 isolated from each other; and

10 displaying the superset nodes in the third layer so the connected-superset node  
11 is separate from the isolated-superset node and such that the connected-superset node is  
12 selectively expandable to display group nodes and connections between the nodes, and the  
13 isolated-superset node is selectively expandable to display group nodes of the second layer.

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1 The method of claim 1, wherein the step of forming comprises a step  
2 of creating a graph of nodes to be displayed in the network as a leaf graph.

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2 The method of claim 2, wherein the leaf graph includes components  
3 and interconnection paths of the network.

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2 4. The method of claim 1 wherein the group nodes in the connected-  
superset node are laid out according to layout rules.

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2 5. The method of claim 4 wherein the group nodes in the connected-  
superset node comprises any one or more of switch groups and host groups.

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2 6. The method of claim 5 wherein a layout rule consists of the switch  
group with the highest connectivity being placed in the center of the connected-superset node.

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2 7. The method of claim 1 wherein the connected-superset node is fully  
expandable while the isolated-superset node is minimized.

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2 8. The method of claim 1 wherein the isolated-superset node comprises  
any one or more of unmapped hubs and isolated switches.

1           9. The method of claim 1 wherein the isolated group node consists of  
2 isolated devices other than unmapped hubs and isolated switches.

1           10. A method of displaying nodes within a network topology, the method  
2 using a processor coupled to a display screen, the method comprising:

3                 forming a first layer of a multi-layer representation wherein at least two nodes  
4 are represented separately;

5                 grouping the nodes of the first layer into group nodes to form a second layer in  
6 the multi-layer representation;

7                 grouping the group nodes of the second layer into a third layer, the third layer  
8 having at least one connected-superset node containing group nodes with nodes connected to  
9 each other, but not connected to any other nodes belonging to other connected-superset  
10 nodes; and

11                 displaying the connected-superset node in the third layer such that the  
12 connected-superset node is selectively expandable to display group nodes and connections  
13 between the nodes.

1           11. The method of claim 10 wherein grouping the group nodes of the  
2 second layer into a third layer further comprises, the third layer having at least one isolated-  
3 superset node containing group nodes having nodes isolated from each other; and

4                 displaying the superset nodes in the third layer so the connected-superset node  
5 is separate from the isolated-superset node and such that the connected-superset node is  
6 selectively expandable to display group nodes and connections between the nodes, and the  
7 isolated-superset node is selectively expandable to display group nodes of the second layer.

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